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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte YONGCAI WANG, KURT M. SCHROEDER, LORI
J. SHAW-KLEIN, THOMAS P. NICHOLAS, SRIDHAR
SADASIVAN, and CHRISTINE M. VARGAS

Appeal 2010-005259
Application 10/021,341
Technology Center 1700

Decided:

Before TERRY J. OWENS, PETER F. KRATZ, and JEFFREY T. SMITH,
Administrative Patent Judges.

OWENS, *Administrative Patent Judge.*

DECISION ON APPEAL
STATEMENT OF THE CASE

The Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1, 8-11, 14, 15 and 17. Claim 18, which is the only other pending claim, stands withdrawn from consideration by the Examiner. We have jurisdiction under 35 U.S.C. § 6(b).

The Invention

The Appellants claim an inkjet recording element. Claim 1 is illustrative:

1. An ink jet recording element comprising a support having thereon an image-receiving layer having a thickness of 5 to 20 microns and, between said support and said image-receiving layer, a base layer having a thickness of 20 to 50 microns, both layers comprising inorganic particles and stabilizer particles in an amount of from about 10 mg/m² to about 5g/m², said stabilizer particles being free of any organic solvent and comprising greater than about 80% by weight of a water-insoluble antioxidant and having a mean particle size of greater than about 5 nm to 500 nm, said inorganic particles comprising greater than about 50% by weight of said image-receiving layer and of said base layer, wherein greater than 50% by weight of said base layer comprises inorganic particles consisting of precipitated calcium carbonate and silica gel, and wherein the base layer also contains binder in the amount of from about 5 to about 20 weight percent, and wherein greater than 50% by weight of the image-receiving layer consist of inorganic particles selected from the group consisting of fumed silica, colloidal silica, fumed alumina, colloidal alumina, and pseudo-boehmite and wherein the inorganic particles in the image-receiving layer have a mean particle size of 50 nm to 500 nm, wherein the coating thickness of the image-receiving layer is determined such that the image-receiving layer holds ink near the surface of the image-receiving layer, above the base layer, when ink in a solvent is applied to the ink jet recording element by an ink jet printer.

The References

Saito	6,217,166 B1	Apr. 17, 2001
Chu	6,440,537 B1	Aug. 27, 2002
		(filed Mar. 27, 2000)
Cuch	7,056,969 B2	Jan. 6, 2006
	(provisional application filed Oct. 9, 2001) ¹	
Kitamura	EP 0 903 246 A2	Mar. 24, 1999

¹ There is no dispute as to whether Cuch is prior art.

The Rejections

The claims stand rejected as follows: claims 1, 8, 9, 11, 14, 15 and 17 under 35 U.S.C. § 103 over Kitamura alone or in view of Saito or Cuch; claims 1 and 10 under 35 U.S.C. § 103 over Kitamura alone or in view of Saito or Cuch, further in view of Chu; and claim 17 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Appellants regard as the invention.

OPINION

We affirm the rejections of claims 1, 8-11, 14 and 15 and reverse the rejections of claim 17.

Rejections of claims 1, 8-11, 14 and 15

Issue

Have the Appellants indicated reversible error in the Examiner's determination that Kitamura would have rendered obvious, to one of ordinary skill in the art, a base layer comprising an antioxidant?

Findings of Fact

Kitamura discloses an ink jet recording material comprising one or more ink receiving layers, at least one of which comprises an ultraviolet ray absorber which preferably comprises an antioxidant (¶¶ 0007-8, 0033-34; 0053). The antioxidant can be a water insoluble powder having a particle size of 500 nm or less (¶ 0041).

Analysis

The Appellants argue that Kitamura does not disclose stabilizer particles in both of two ink receiving layers (Br. 4). The Appellants argue that Kitamura never refers to the antioxidant being in more than one ink

receiving layer and does not say that if two ink receiving layers are used they have the same composition (Br. 4-5). Kitamura, the Appellants argue, is concerned only with light resistance in the outermost ink receiving layer and discloses that the additional ink receiving layer may contain no ultraviolet absorber (Br. 4, 6; Reply Br. 3).

Kitamura's disclosure that at least one of the ink receiving layers can contain an antioxidant (¶¶ 0007-8, 0033-34) is a disclosure that the antioxidant can be contained in more than one ink receiving layer. Moreover, Kitamura's disclosure that at least one of two or more ink receiving layers is the principal ink receiving layer which contains the ultraviolet ray absorber (and antioxidant) and preferably forms an outermost layer (¶ 0053) indicates that "outermost layer", as that term is used by Kitamura, can comprise more than one layer, the outer of which corresponds to the Appellants' imaging receiving layer and an inner one of which corresponds to the Appellants' base layer.²

The Appellants argue that their "base layer is designed, not for imaging with dye, but for use as a sump for the solvent in applied ink during printing" (Br. 6).

The Examiner finds that Kitamura's ink receiving layers other than the outer layer act as a sump and, therefore, correspond to the Appellants' base layer (Ans. 7-8).³ Because the Examiner's finding is reasonable and

² Thus, we are not persuaded by the Appellants' argument that "[t]here cannot really be more than one outermost layer and the reference paragraph [0055] can only be interpreted to be the formation of one layer (Reply Br. 3).

³ The pages of the Examiner's Answer are unnumbered. The page numbers cited herein have been provided by the Board.

the Appellants have not argued that it is wrong (Reply Br. 3-4), we accept it as fact. See *In re Kunzmann*, 326 F.2d 424, 425 n.3 (CCPA 1964).

The Appellants argue that the examples in their Specification indicate that the composition of the base layer is significantly different from the composition of the image receiving layer (Br. 7).

“[D]uring examination proceedings, claims are given their broadest reasonable interpretation consistent with the specification.” *In re Translogic Tech. Inc.*, 504 F.3d 1249, 1256 (Fed. Cir. 2007), quoting *In re Hyatt*, 211 F.3d 1367, 1372 (Fed. Cir. 2000). The Appellants’ Specification states that the ink jet recording element preferably contains a base layer and that the base layer preferably comprises inorganic particles and stabilizer particles (Spec. 4:22-25). The Specification, however, does not indicate that the compositions of the image receiving layer and base layer must be different. Thus, the Appellants improperly are arguing a limitation that is not in the claims. See *In re Self*, 671 F.2d 1344, 1348 (CCPA 1982).

The Appellants argue that Tables 1-3 in their Specification show that the claimed invention provides an improvement with respect to ambient light fade (Br. 7-8; Reply Br. 5).

That argument is not well taken because the Appellants have not provided a side-by-side comparison of the claimed invention with the closest prior art which is commensurate in scope with the claims, and explained why the results would have been unexpected by one of ordinary skill in the art. See *In re Baxter Travenol Labs.*, 952 F.2d 388, 392 (Fed. Cir. 1991); *In re De Blauwe*, 736 F.2d 699, 705 (Fed. Cir. 1984); *In re Grasselli*, 713 F.2d 731, 743 (Fed. Cir. 1983); *In re Clemens*, 622 F.2d 1029, 1035 (CCPA

1980); *In re Freeman*, 474 F.2d 1318, 1324 (CCPA 1973); *In re Klosak*, 455 F.2d 1077, 1080 (CCPA 1972).

Conclusion of Law

The Appellants have not indicated reversible error in the Examiner's determination that Kitamura would have rendered obvious, to one of ordinary skill in the art, a base layer comprising an antioxidant.

Rejection of claim 17 under 35 U.S.C. § 103

Issue

Have the Appellants indicated reversible error in the Examiner's determination that Kitamura discloses an image receiving layer having no UV absorbers for preventing light fade?

Analysis

The Appellants argue that Kitamura requires an ultraviolet ray absorber in the image receiving layer (Br. 8).

The Examiner argues that Kitamura's ultraviolet ray absorber can be a transition metal oxide [¶ 0025], in which case an organic ultraviolet ray absorber is not required (Ans. 4).

Kitamura teaches that the ultraviolet ray absorber provides light resistance (¶ 0008). When Kitamura's image receiving layer contains a transition metal oxide ultraviolet ray absorber it does not meet the Appellants' claim 17 requirement that the image receiving layer has no ultraviolet ray absorber for preventing light fade.

Conclusion of Law

The Appellants have indicated reversible error in the Examiner's determination that Kitamura discloses an image receiving layer having no UV absorbers for preventing light fade.

Rejection of claim 17 under 35 U.S.C. § 112, second paragraph
Issue

Have the Appellants indicated reversible error in the Examiner's determination that "the image-receiving layer has no UV absorbers for preventing light fade" in claim 17 is indefinite?

Analysis

"[T]he indefiniteness inquiry asks whether the claims 'circumscribe a particular area with a reasonable degree of precision and particularity.'"

Marley Mouldings Ltd. v. Mikron Industries Inc., 417 F.3d 1356, 1359 (Fed. Cir. 2005), quoting *In re Moore*, 439 F.2d 1232, 1235 (CCPA 1971).

The Appellants' claim 17 depends from claim 1 which recites that the image receiving layer contains inorganic particles selected from fumed silica, colloidal silica, fumed alumina, colloidal alumina, and pseudo-boehmite. The Examiner argues that claim 17 appears to be at odds with the Appellants' Specification which discloses inorganic particles such as titanium dioxide and zinc oxide which are known UV absorbers (Spec. 4:29-5:5) (Ans. 8-9; Supp. Ans. 2).

The Appellants argue that claim 17 is limited to excluding inorganic particles that are effective for preventing light fade, and that claim 1's inclusion of inorganic particles that are excluded by claim 17 does not render claim 17 indefinite (Reply Br. 2; Second Reply Br. 1).

As argued by the Appellants, inorganic particles such as titanium dioxide and zinc oxide which are UV absorbers that prevent light fade are excluded by claim 17. The Examiner has not established that the exclusion of such inorganic particles causes claim 17 to fail to circumscribe a particular area with a reasonable degree of precision and particularity.

Conclusion of Law

The Appellants have indicated reversible error in the Examiner's determination that "the image-receiving layer has no UV absorbers for preventing light fade" in claim 17 is indefinite.

DECISION/ORDER

The rejection of claims 1, 8, 9, 11, 14, 15 and 17 under 35 U.S.C. § 103 over Kitamura alone or in view of Saito or Cuch is affirmed as to claims 1, 8, 9, 11, 14 and 15 and reversed as to claim 17. The rejection of claims 1 and 10 under 35 U.S.C. § 103 over Kitamura alone or in view of Saito or Cuch, further in view of Chu is affirmed. The rejection of claim 17 under 35 U.S.C. § 112, second paragraph, is reversed.

It is ordered that the Examiner's decision is affirmed-in-part.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED-IN-PART

tc

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